## ABSTRACT OF THE DISCLOSURE

A method for determining fault sources for device failures comprises: generating failure signatures of fault sources for preselected tests; generating aggregate failure signatures for individual of the fault sources from the failure signatures; generating aggregate device test data from test data of a device for the preselected tests; generating aggregate matches by comparing the aggregate failure signatures with the aggregate device test data; and determining fault sources for device failures by comparing the test data of the device with ones of the failure signatures of fault sources corresponding to the aggregate matches. An apparatus configured to perform the method comprises at least one circuit.